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Original Research Article

Cellphone and media usage among adolescent girls of Bhopal city, Madhya Pradesh, India

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ABSTRACT

Background: Several researchers have reported that mobile phone uses are increasing among adolescents. Better understanding of cellphone and media usage by adolescents would help health care providers in guiding more responsible use of cellphone by teenagers. Aim of the study was to study the level and pattern of mobile phone usages among adolescent girls of Bhopal city, Madhya Pradesh.

Methods: This cross-sectional study was conducted among adolescent girls between 14 to 19 years of age studying in schools of Bhopal city. Data was collected using a self-administered questionnaire. The questionnaire contains items related to demographic variables, cellular phone usage and patterns.

Results: All the study subjects were using smart phones. Facebook was the most commonly surfed website. Maximum adolescent girls were using smartphones for 2-4 hours in a day. Seventy-eight (69.03%) study subjects preferred text messaging service for awareness about reproductive and sexual health.

Conclusions: The cellphone usage can also be exploited to promote awareness about reproductive health among adolescents.

Keywords: Adolescents, Cell-phone, Health, Mobile phone, Technology

INTRODUCTION

In recent years, wireless devices such as cell phones, pagers and pocket PCs have gained popularity among a wide variety of users.¹ Use of smart phones has exploded and has become an essential part of business, commerce and society.² Smartphone technology provides immense benefits for users as they access and disseminate information rapidly.³

Several researchers have reported that mobile phone uses are increasing among adolescents.^{3,4} According to the American society of Addiction Medicine, Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological,

social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors. Nowadays, addiction not only refers to drug or substance abuse, but it also refers to gambling, internet, games, or even smart phones.⁴

The smart phone usage not only has a behavioral impact on adolescents but can also affect their holistic development. Teens may face several barriers to accessing reliable, useful, and age-appropriate information and services for their health. Increasing use of smart phones can be taken as positive tool for health promotion.⁵ The use of text messaging is an innovative way to engage teens in preventive health learning and practices.⁶

Better understanding of cellphone and media usage by adolescents would help health care providers and parents in guiding more responsible use of cellphone by teenagers. However, no such studies have been reported from central India. Hence, present research was conducted to study the level and pattern of mobile phone usages among adolescent girls. Also, association of mobile phone usage was evaluated with various socio-demographic variables.

METHODS

The present cross-sectional, questionnaire based study was conducted by the department of Obstetrics and Gynaecology, People’s College of Medical Sciences and Research Center, Bhopal, Madhya Pradesh. The study population included adolescent girls between 14 to 19 years of age studying in schools of Bhopal city. Study subjects were recruited by convenient sampling from two English medium schools of Bhopal city. All the adolescent girls present on the day of study were taken as study subjects. The study subjects were explained about study objectives. Also, they were assured about anonymity and could opt out the study at any point of time.

Data was collected using a self-administered questionnaire. The questionnaire contains items related to demographic variables, cellular phone usage and patterns among adolescents. The questionnaire was first pre-tested among twenty adolescent girls. Also, the contents of questionnaire were scrutinized by a panel of three academicians. After this necessary change were made to prepare a revised and final version of the questionnaire. Participation in the study was voluntary. The verbal consent was obtained from participants. Ethical clearance for the study was obtained from ethical committee of People’s College of Medical Sciences and Research Center, Bhopal, Madhya Pradesh, India. For statistical analysis, data collected was entered in Microsoft excel 2013 for Windows. Frequency and percentages of responses were calculated using version 21.0 of the Statistical Package for Social Sciences (IBM Corporation, Armonk, New York, USA).

RESULTS

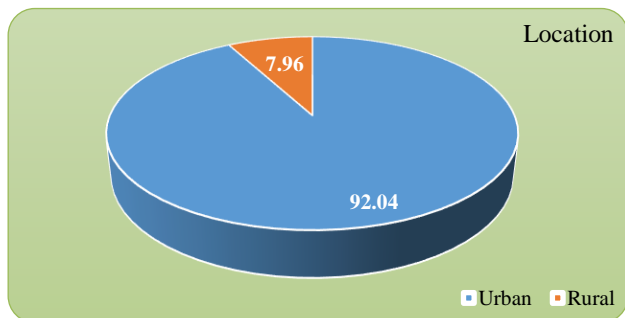


Figure 1: Distribution of study population according to geographic location (in percentage).

A total of 113 adolescent girls consented to participate in the study. The questionnaire distributed among these study subjects were completely filled, hence response rate was 100%. Among them 104 (92.04%) belong to urban area and remaining 09 (7.96%) belong to rural area (Figure 1). Age wise distribution showed that 15 (13.27%) belong to 10-14 years and 98 (86.73%) belong to 15-18 years (Figure 2).

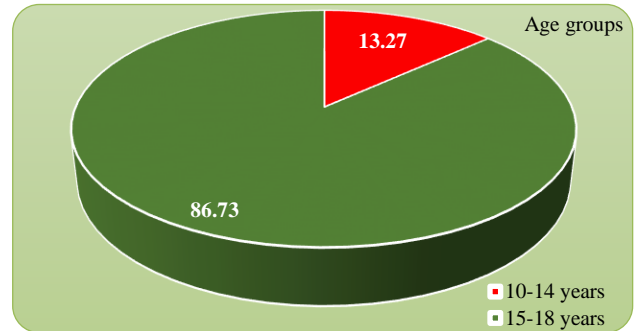


Figure 2: Age wise distribution of study population (in percentage).

All the study subjects were using smart phones (100.00%) followed by use of laptops (38.05%) and tablets (5.31%) (Table 1). Eighty-three (73.45%) adolescent girls were using these devices under parental supervision (Figure 3).

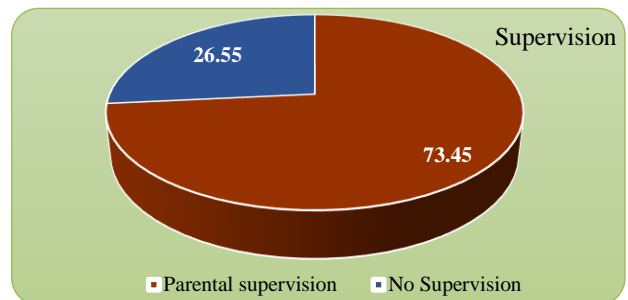


Figure 3: Type of supervision on usages of devices (in percentage).

Facebook was the most commonly surfed website 75 (66.37%), followed by Google 43 (38.05%) and Whatsapp 30 (26.55%) (Table 2).

Table 1: Usages of various devices by study population.

Devices	Number of study subjects	Percentage of study subjects
Smart phones	113	100.00
Laptops	43	38.05
Tablets	06	5.31

Nearly 93% were using these websites for communication, 88.50% for chatting and 67.26% for surfing (Table 3).

Table 2: Most commonly surfed websites by study population.

Websites	Number of study subjects	Percentages of study subjects
Facebook	75	66.37
Google	43	38.05
Whatsapp	30	26.55

Table 3: Usages of websites by study population.

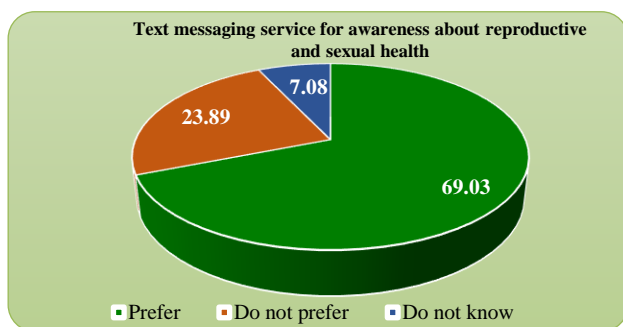
Usages of websites	Number of study subjects	Percentages of study subjects
Communication	105	92.92
Chatting	100	88.50
Surfing	76	67.26

Maximum adolescent girls (44.25%) were using smartphones for 2-4 hours (Table 4).

Table 4: Smartphone usages by study population according to time duration.

Hours/day	Number of study subjects	Percentage of study subjects
1 hour	07	6.19
2-4 hours	50	44.25
4-8 hours	25	22.12
>8 hours	31	27.43

Seventy-eight (69.03%) study subjects preferred text messaging service for awareness about reproductive and sexual health. However, 27 (23.89%) did not prefer and 08 (7.08%) were not sure (do not know) (Figure 4).

**Figure 4: Preference for text messaging service for awareness about reproductive and sexual health (in percentage).**

DISCUSSION

Wireless technologies now cover 96% of the global population and penetrate all walks of life. With 6.8 billion mobile-cellular subscriptions worldwide, the technology has successfully bridged gaps in communication and ignited economic growth and development globally.⁷ In present study all the study subjects were using smart phones. With 877 million

wireless subscribers, India has the second largest wireless communication subscriber base in the world. Wireless subscribers comprise 96% of telecom subscribers in India and contribute to an urban wireless tele-density fourfold that of rural India. One of the reasons for the popularity of mobile phones in India is the low call tariff. At 1.6 USD/month, India has one of the lowest mobile call tariffs globally. This makes mobile phone communication economical in the Indian context.⁷

In the present study, maximum adolescent girls (44.25%) were using smartphones for 2-4 hours. Given the ever-increasing amount of time people spend using technology, and the potentially deleterious effects such increases can have on quality of life, the present study's investigation of cell-phone use is critically important. In a study Roberts et al. found that women reported spending an average of 600 minutes on a cell-phone every day compared to 459 minutes for males.⁸

Several studies have reported the adverse effects of excessive usage of mobile phones. In a study by Zheng et al., the strongest association between inattention and the time spent on the mobile phones was among students who spent more than 60 minutes per day playing on their mobile phones.⁹

According to Thomee, spending more than two hours daily for emailing and chatting was related cross-sectionally to overweight in the women.¹⁰ Nearly 93% adolescent girls in the present study were using websites for communication. In a study Roberts et al. observed that desire to connect socially was a major reason to use cell- phones.⁸

Majority of study subjects in present research preferred text messaging service for awareness about reproductive and sexual health. In a study Gerber et al. has demonstrated feasibility and acceptability of text messaging as a method for promoting healthy behaviors.⁶ The mobile phone, as a tool for receiving health information and supporting healthcare through mHealth interventions was acceptable in the rural Indian context.⁷

CONCLUSION

In conclusion, the cellphone usage among adolescent girls has almost become a universal phenomenon. Proper parental guidance and support by health care providers can help judicious use of cellphone by adolescents.

The cellphone usage can also be exploited to promote awareness about reproductive health among adolescents. Through text messaging, participants will feel that they have a level of privacy that is not offered through other forms of health communication or health education. With so many aspects of their daily lives revolving around mobile phones, it is possible that teens may be receptive to mobile phone-based interventions that involve health topics geared toward their age-group.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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